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19. A REMARKABLE CASE OF ALBINISM IN THE
FRESHWATER EEL, *ANGUILLA*
BENGALENSIS GRAY

During the course of our investigations on the Indian Freshwater Eel, *Anguilla bengalensis* Gray, a live albino specimen was obtained on February 13th, 1952 from a drain conveying wastewater from the Pulta Water Works to the Hooghly River at Barrackpore. The specimen is being reared in an aquarium along with some elvers and juveniles of the same species and on account of its remarkable elegance and grace it is nicknamed 'the Fairy Eel'. Since cases of complete albinism are very rare, particularly among the apodal fishes, and as this happens to be the first record of an albino eel from the Indian region, notes on the specimen are given below :

The entire body of the specimen (measuring about 20 inches in length) is white, excepting the eyes which are deep bluish grey in colour. On a closer examination the body is found to have a light pinkish tint probably imparted by the blood. Blood vessels branching into capillaries can be clearly seen in the vertical fins, especially in the marginal zone which is nearly transparent. Scales on the body are visible through the translucent skin showing the characteristic pattern. But for the absence of pigmentation, the albino has all the normal body proportions and other characters typical of the species.

For nearly a week the specimen remained exposed to direct light in the aquarium, during which period it developed a few very faint cloudy streaks of coloration. An earthenware pipe has since been provided in the aquarium, in which the albino takes shelter throughout the day time. A few days after the provision of this shelter, we observed that the secondary coloration started gradually diminishing till finally it disappeared. It is, therefore, presumed that the secondary coloration, which is different from the normal pigmentation in *Anguilla*, has developed due to continuous exposure to direct light.

In captivity the albino eel as well as the normal elvers and juveniles appear to relish earthworms more than any other food. No cannibalistic tendency has been observed, and the albino seems to tolerate the presence of the elvers without any sign of discomfort or aggressiveness.

Whenever water in the aquarium is changed the eel shows signs of considerable excitement by attempting to jump out or burrow into the sand at the bottom. On one of such occasions it actually succeeded in jumping out, because the aquarium was inadvertently kept open, but the fall of about five feet to the floor did not seem to have any harmful effects on the fish.

At times the albino rests with its ventral side upwards (topsy-turvy position) and occasionally on its lateral sides. This interesting

habit was observed more often in the early hours of the morning than at other times. At the slightest disturbance, the eel resumes its normal position, and these resting postures are assumed only when there is nobody in the room in which the aquarium is kept, and when the surroundings are quiet. Normal juveniles have also been found to assume similar resting postures.

Though incomplete albinism is of frequent occurrence in fishes, complete albinism is comparatively rare especially in eels. Among the Indian fishes albinism is fairly common in catfishes like the Magur, *Clarias batrachus* (Linn.) and Hora (1926) has described a partial albino of the same species. In the Bose Institute at Calcutta there are two albino specimens of the Magur in a garden cistern. They are there for the last four years and are reported to be the survivors of a batch of four specimens procured from market. Mr. A. David of this Research Station reports seeing a large albino specimen of the Rohu, *Labeo rohita* (Hamilton), in the fish market at Sambalpur (Orissa) in 1950. Mr. P. C. Dass of Messrs. Raishaib & Sons, one of the premier fish auctioneers of Howrah, has informed us that a few months ago a white (albino) Rohu was sent to him by an up-country (U.P.) supplier and that it fetched the same price as the normal specimens in the consignment.

It is beyond the scope of this note to discuss in detail the phenomenon of albinism in fish. Many of the earlier references on the subject are given by Dean (1923) and some of the subsequent records are by Norman (1934), Schreitmuller (1934), Aitkin (1937) and Gudger (1937). Complete albinism is of less frequent occurrence than ambicoloration (Jones & Menon, 1950), xanthochroism (Norman, 1947) and melanism (Hora, 1941). Albino specimens are only nature's freaks and they being more conspicuous than the normal ones, are at a definite disadvantage in the struggle for existence and hence those that escape their natural enemies and survive to attain sexual maturity are few and far between.

CENTRAL INLAND FISHERIES RESEARCH STATION,
BARRACKPORE,
March 21, 1952.

S. JONES
V. R. PANTULU

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[Since communicating the above note, the following further observations on the albino eel have just been received from the authors:—

‘With the advent of warm weather the eel became more active and started feeding voraciously on fish fry and small prawns provided in

the aquarium. Some of the elvers kept along with the albino disappeared, presumably having been consumed by it. Elvers kept in a separate aquarium without food were found to devour the smaller ones amongst them. The albino is still alive in one of the station aquaria.'—Eds.]

20. MURREL vs. COBRA

Murrel is the most common fresh water fish of South India and many a tank and well hold them. Here they freely breed and grow to a large size.

There are a few murrel in one of my wells, where I have installed a pump-set. On the evening of the May 29th, 1950, I was running the pump-set when a splash and disturbance inside the well drew my attention. A small cobra about $1\frac{1}{2}$ ft. in length had fallen into the well from the adjoining crevices. Three or four murrel at once chased the snake and one of them, about a cubit in length (may be about 3 lb. in weight), caught hold of the snake and was fast devouring it. I thought the snake was doomed, when suddenly the fish vomitted and let go the snake. The snake once free disappeared like lightning into one of the crevices in the sides of the well.

Now, the behaviour of the fish that had seized the cobra was very funny and strange. It was gasping for breath, opening its mouth repeatedly, coming to the surface frequently, splashing and disappearing, and repeating this restless and giddy performance again and again. It had obviously been bitten by the cobra in the lower jaw. As darkness set in, I came home. Next morning I found the murrel dead.

15, PERUMAL KOIL STREET,
FORT, COIMBATORE,
March 7, 1952.

B. SUBBIAH PILLAY

[The Murrel (*Ophicephalus striatus*) is known to be a carnivorous and voracious fish biting at any bait from a live frog to an artificial fly (Jordan, Fishes 1935).—Eds.]

21. TASTE OR SMELL IN SALMON

Here is something highly interesting to the fisherman, also the angler.

Under the above caption there was published in *The Field* of July 19th, 1952 an article by the Director of the Zoological Society of London embodying comments upon certain experiments regarding salmon migrating up the rivers of British Columbia.

The article shows that salmon in the rivers are immediately affected in their movements by insertion of the human hand in the water. A number of testing experiments were made with water in which the hands had been immersed for one minute; with sea water; with urine diluted about one in seven; and with a solution of tomato juice, the latter to find if the mere presence of a foreign organic substance was repellent. None of these solutions except a hand-rinse made any difference to the migration rate when they were added to the water of the fish ladder. Similar tests with similar